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Shatskov, A.

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Author: Shatskov, A

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Hittite imperfectives in *-anna/i-*

5.1 According to one of the historical explanations of the imperfective suffix *-anna/i-*, it is considered to be a combination of an infix and several suffixes, see further 5.9. Therefore, it will be appropriate to examine the formal and semantic properties of this suffix and various analyses that have been suggested for it.

5.2 The imperfective aspect in Hittite can be explicitly marked with the following three suffixes: *-ske/a-*, *-anna/i-* and *-ss(a)-*, with *-ske-* being by far the most common. More than twenty verbs have an imperfective stem in *-anna-*, and four verbs form their imperfective stem with *-ss(a)-*. Some verbs have more than one imperfective stem, e.g., *walhanna-* and *walhiske-* ‘to strike’ (on the distribution of these stems see below), and sometimes *-ske-* is added to another imperfective suffix, e.g., *huittiyanniskemi* KUB 24.14 I 26 (see, e.g., Hoffner, Melchert 2008: 175).

There have been attempts to find functional or semantic difference between these suffixes. For instance, *anna*-imperfectives have been called duratives, and formations in *-ske/a-* – inchoative or iterative (Kronasser 1966: 556 and n.1). Special attention was paid to the verb *walh-* ‘to strike’, since it has many forms both with *-ske-* and *-anna/i-*. For instance, Otten (1951: 227⁷) argued that the difference between *walahzi* in ABoT 1.7 V 5 and *walhannai* in V 15 was the plurality of the object in the latter case. On the contrary, Oettinger (1992b: 142ff.) argued that *walhiske-* was an iterative formation whereas *walhanna/i-* was an intensive one. However, the distribution of imperfective variants for *walh-* turns out to be diachronic: in Old Hittite originals we see only *anna/i*-imperfectives (e.g., *walhannianzi* KBo 17.1+ II 36', KUB 60.41 II 8') and it is only in Middle Hittite that forms with *-ske-* start to appear, initially added to *-anna-*, cf. *[wa]alhanniskenenun* KUB 14.1 rev. 87 (MH/MS, Madd.) and Hoffner, Melchert 2008: 322.

5.3 Stems extended with the suffixes *-ske-*, *-anna/i-* and *-ss(a)-* all had the same functions, namely: a) progressive, b) durative, c) iterative, d) habitual, e) gnomic, f) distributive, h) inceptive¹⁹³ (s. Hoffner, Melchert 2008: 318f.).

5.4 The choice of an imperfective suffix seems to be lexically conditioned. The following verbs make imperfectives in *-anna/i-*¹⁹⁴: *hallanna-* ‘to lay waste’ or ‘to trample’ (*hal-la-an-ni-ya-at-ta-ri* KUB 4.3 obv. (9) NS; *hal-la-an-ni-an-zi* Bo 3276 obv. 6 MS; *hal-la-an-ni-eš-k[e-ez-zi]* KBo 19.112 17 MH/NS), *haluganna-* ‘to announce’ (KUB 27.29+ III 17 *ha-lu-ga-an-ni-iš-ke-e[z-zi]* MH/ NS)¹⁹⁵, *hattanna-* ‘to pierce’ (*ha-at-ta-an-na-i* KBo 13.13 obv. 4 OH/NS; *ha-at-ta-an-n[i-an-zi]* KBo 20.20 obv. 6 OS; *ha-at-ta-an-ni-er* KBo 3.34 I 4 OH/NS; *ha-ad-da-an-ni-eš-ke-u-en* KBo 18.54 rev. 16 MS?), *?huganna-* ‘to conjure’ (*hu-u-ga-an-ni-ya-u-wa-an-zi* KBo 64.56 rev. 6 NS)¹⁹⁶, *huganna-* ‘to butcher’ (*hu-ga-an-ni-wa-an* KBo 21.25 I 44 OH/MS), *hullanna-* ‘to strike, defeat’ (*hu-ul-la-an-ni-wa-an* KBo 32.19 III 42 MH/MS), *hu(i)ttiyanna-* ‘to draw, pull’ (e.g., *hu-ut-ti-an-na-i* KBo 17.18 II 12 OS, *hu-it-ti-ya-an-ni-iš-ke-mi* KUB 24.14 I 26 NS, 15+ instances), *iyanna-* ‘to go’ (e.g., *i-ya-an-na-aḫ-ḫé* KBo 17.4 II 8 OS, 30+ instances), *ishuwanna-* ‘to throw, pour’ (*iš-hu-u-wa-an-na-aḫ-ḫi* KUB 7.5 II 30 MH/NS; *iš-hu-wa-an-na-aḫ-[ḫi]* KUB 12.44 III 17 NH), *iskallanna-* ‘to slit, tear’ (*iš-kal-la-an-ni-an-tu-uš* KUB 58.63 II 2 NS), *iskaranna-* ‘to sting, pierce’ (*iš-kar-ra-an-ni-an[-du]* KBo 8.35 II 21 MH/MS), *isparanna-* ‘to spread’ (*iš-pa-ra-an-na-i* KUB 57.83 IV 5 NS), *lahhiyanna-* ‘to set out’ (*la-aḫ-ḫi-ya-an-ni-iš-ga-*

¹⁹³ The stem *parsanna/i-* ‘to break’ is often attested in subordinate clauses and is sometimes interpreted as a perfective formation, e.g.: KBo 2.15 IV with. dupl. KUB 25.14 IV 10: NINDA.x [(*kuin šepit*) (11) *pár-š[(i-ya-an-ni-iš-kán-zi)]*] “Das [...] Brot (aus) šepitt-, das sie wiederholt brechen (gebrochen haben)” (Nakamura 2002: 200); KBo 5.1 I 31 *namma harnāu* UZU UDU NINDA^{HLA} *-ya kueus pá-r-ši-ya-an-ni-iš-ke-et* “Ferner nimmt er den Gebärstuhl, das Schafffleisch und die Brote, die er zerbrochen hat”, I 38 *nu ŠA 4 UDU^{HLA} UZU^{HLA} NINDA^{HLA} *-ya kueus pá-r-ši-ya-an-ni-iš-ke-et* (39) *n=aš A-NA DINGIR^{LIM} EGIR-pa hingazi* “Das Fett(fleisch) der 4 Schafe und die brote, die er zerbrochen hat” (Strauss 2006: 286ff.). In fact, *parsanna/i-* here has the progressive function and is to be translated with the present continuous rather than present perfect tense, e.g., “the bread he is breaking/crumbling”.*

¹⁹⁴ The alleged stem *sipandanna/i-* is not included, since *ši-ip-pa-an-da-an-na-aš* (KUB 24.12 III 25) is to be read as *ši-ip-pa-an-da-an-<zi> na-aš* pace Yoshida 1991: 48, 50. Hoffner, Melchert 2008: 322 point to the existence of *-anna-* imperfectives for *talliya-* ‘to call’, regretfully without indicating its occurrence in texts.

¹⁹⁵ The verb *haluganna/i-* is supposed to be an imperfective to **halugai-* (an unattested denominative from *haluga-* ‘message’). HW² H: 82 inserts *haluganna/i-* to the entry for *haluganai-* ‘to announce’ (*ha-lu-ga-na-iz-zi* KUB 28.4 rev. III 10 OH/NS). While it cannot be completely excluded that *haluganniske-* is just a *ske/a-*imperfective to *haluganai-*, it is not likely, as double *-nn-* would be difficult to explain, cf. impf. *pí-i-ya-ni-iš-ke-nu-un* (KUB 14.15 IV 25 Murs. II) from *piyanāi-* ‘to reward’.

¹⁹⁶ See Oettinger 1979: 495 with note 96.

u-e-ni KBo 4.4 III 50 Murš. II), *piyanna-* ‘to give’ (*pí-ya-an-ni-wa-an* KBo 8.42 rev. 3 OS), *parhanna-* ‘to drive’ (*pár-ḥa-an-na-i* KBo 3.5 II 52 MH/MS), *parsiyanna-* ‘to break’ (e.g., *pár-ši-ya-an-na-i* KBo 20.4 IV! 6 OS, 30+ instances), *pessiyanna-* ‘to throw’ (*pé-eš-ši-ya-an-ni-eš-ke-ez-zi* KBo 24.47 III? 18 NS), *piddanna-* ‘to carry, pay’ (*píd-da-an-ni-iš* KBo 3.13 rev. 12 OH/NS, *píd-da-a-an-ni-wa-an* KUB 14.1 obv. 74 MH/MS), *sallanna-* ‘to pull, drag’ (e.g., *šal-la-an-na-a-i* KUB 12.8 IV 7 OH/NS, 8 instances), *taksanna-* ‘to level’ (*ták-ša-an-ni-iš-ke-et* KBo 10.2 II 5 OH/NS), *tiyanna-* ‘to put’ (*ti-an-na* KUB 20.76 I 17 with dupl. KBo 30.165 I 10 OH/NS¹⁹⁷, *ti-ya-an-ni-ya-u-wa-an* KUB 43.61 I? 7 OH/NS), *tuhsanna-* ‘to cut off’ (e.g., *túh-ša-an-na-i* KBo 15.10 II 24 MH/MS, 6 instances), *walhanna-* ‘to strike’ (e.g., *wa-al-ḥa-an-ni-an-zi* KBo 17.1+ II 36’ OS, *wa-al-ḥa-an-ni-eš-kán-zi* IBoT 2.96 V 17 OH/NS, 20+ instances), *weriyanna-* ‘to call’ (*ú-e[-ri-an-ni-iš-k]e-ši* KUB 14.16 IV 21 with dupl. [*ú-e-ri-a*]n-[n]i-iš-ke-ši KUB 14.15 + IV 49 Murš. II).

Only a few verbs regularly take *-anna/i-* to form their imperfective stem: *hatt-* ‘to pierce’, *huittiya-* ‘to draw, pull’, *iya-*^{tt(ri)} ‘to go’, *pars(iya)-* ‘to break’, *saliya-* ‘to pull’ and *tuhs-* ‘to cut off’; in the case of *walh-* the original *-anna/i-* is gradually replaced with *-ske/a-* (cf. Hoffner, Melchert 2008: 322). *Huek-* ‘to conjure’, *huek-* ‘to slaughter’, *iskār/iskar-* ‘to sting, pierce’, *lahhiye/a-* ‘to go on an expedition’, *pai/i-* ‘to give’, *parh-* ‘to drive’, *pessiye/a-* ‘to throw’, *dai/ti-* ‘to put’ only have one or two imperfectives in *-anna/i-* besides numerous imperfectives in *-ske/a-*. The remaining verbs only have a few imperfective forms (only in *-anna/i-* or both in *-anna/i-* and *-ske/a-*), so their primary imperfective stem cannot be established.

The verb *nanna-* ‘to drive’ is often believed to be an imperfective in *-anna/i-*, cf., e.g., HED 7: 40. As Kloekhorst and Lubotsky (2014) have argued, the root underlying the verbs *nē-*, *nai-* ‘to turn’ and *nanna/i-* ‘to drive’ is just **neh₁-*; therefore, *nanna/i-* can perfectly be a reduplicated stem *na-nn-ai/i-* with a copy vowel reduplication¹⁹⁸. For *-a-* in the reduplication syllable cf. *pappars-* ‘to sprinkle’ and for a causative

¹⁹⁷ *Tianna* could also be an infinitive from *dai-*, cf. HEG T: 365.

¹⁹⁸ According to Dempsey (2015: 333), partial copy reduplication is the most productive synchronic pattern of reduplication. Since this type of reduplication is attested both in Hittite and Luwian, it seems safe to assume that it was already operating in Proto-Anatolian. Therefore, *nanna/i-* may go back to Proto-Anatolian **no-nh₁-oi/i-*.

reduplicated stem, cf., e.g., *asās-* ‘to settle, install’ from *es-* ‘to sit’. In my opinion, *nanna/i-* ‘to drive’ can hardly be an imperfective in *-anna/i-* due to its significant semantic difference from *nē-*, *nai-* ‘to turn’: such a divergence in meaning is otherwise unattested not just for *anna/i-* imperfectives but also for much more numerous *ske/a-* imperfectives.

5.5 Relics of these formations have also been found in other Anatolian languages. In Luwian, the suffix *-anna-* is attested in CLuw. *ūppannandu* from *ūppa-* ‘to bring’ and CLuw. *māmmanna-* ‘to see, look at’, s. Melchert 1993: 134, 242. Melchert (2003: 205f.) remarks that due to scarce attestation of *-anna-* in Luwian it is difficult to determine whether this suffix was a marker of imperfective aspect. Yakubovich (2009: 143f.) notes that *māmmannaddu* in KUB 35.16 I 10 can be compared to Hitt. *sakuwa har(k)-/ epp-* ‘to keep an eye (on something)’, which makes the imperfective interpretation of the stem *mammanna-* likely. Rizza (2013: 92) compares Lydian suffix *-ēn-* (in *vcbaqēnt* ‘to destroy?’) to Hitt. imperfectives in *-anna/i-*. Even if the Lydian suffix is unrelated, the Hittite and Luwian data show that *-anna/i-* is at least common Anatolian.

5.6 In Hittite, the verbs of this type conjugate similarly to *mēma/i-* ‘to speak’ (Oettinger’s II 3 a Typ γ (Oettinger 1979: 77f.)) and have a remarkable alternation of *-a-* and *-i-* in the suffix: 1sg.pres. *i-ya-an-na-aḫ-hé* KBo 17.4 II 8-9, 3sg. pres. *pár-ši-ya-an-na-i* KBo 20.4 IV! 6, 3pl. pres. *šal-la-an-ni-ya-an-zi* KUB 58.14 rev. l. K. 24, part. *wa-al-ḫa-ni-an-da* KBo 10.25 VI 15.

Thus, we have *-a-* in the singular stem vs. *-i-* in the plural stem and in 3sg. pret. In the New Hittite period, *-a-* sometimes appears in plural as well: *pár-ši-ya-an-na-an-zi* KUB 25.32 II 22 (OH/NS) besides *pár-ši-ya-an-ni-an-zi* in III 24. Some verbs, mostly *iyanna-*, show forms of *-ye/o-* class, e.g., *iyanniyazi* KUB 8.68 I 7 or *iyanniyanzi* KUB 20.87 I 14.

It is clear that this type has developed from the *dai/tiya-* class, but it is disputed how exactly the development took place. Kloekhorst (2008: 145ff.) assumes analogy

to the *tarna*-class that started already in pre-Hittite, whereas Kümmel (2012: 203) argues that in the singular *-ai-* in the post-tonic position was monophthongized to *ē*, which in turn developed into either *a* or *i* depending on whether it was in an open or closed syllable.

5.7 I know of only three participial forms to a stem in *-anna/i-* – *wa-al-ḫa-ni-an-da* KBo 10.25 VI 15' with a duplicate KUB 53.32 6', *iš-kal-la-an-ni-an-tu-uš* KUB 58.63 II 2 and *i-ya-an-ni-an* KUB 9.34 III 37 (*i-ya-an-ni-an ge-nu-un*), which seems to be a scribal mistake for *iyanniantan* or *iyandan*, cf. *iyandan genun* in l. 34, for the discussion see Hutter 1988: 82f.

5.8 Some imperfectives in *-anna/i-* may in fact be denominative verbs derived from abstract nouns in *-ātar*. This derivation is best illustrated by *taksanniske-* 'to level', which must have been derived from *taksātar* 'level' rather than from *taks-* 'to unify, mingle' (Kloekhorst 2008: 815). In fact, *taksanniske-* is likely to be a *-ske/a-* imperfective from **taksanniye/a-*, parallel to Luwoid *taksatniye/a-* 'id.' which occurs twice in KUB 15.34 I 45 and III 52. This derivational mechanism may be responsible for several unexpected imperfectives in *-anna/i-* attested besides regular imperfectives in *-ske/a-*; for instance, *hūganniye/a-* (*ḫu-u-ga-an-ni-ya-u-wa-an-zi* KBo 64.56 rev. 6 NS) 'to conjure' may be derived from *hugatar* 'conjunction'¹⁹⁹; *iskaranniye/a-* (*iš-kar-ra-an-ni-an[-du]* KBo 8.35 II 21 MH/MS) may be derived from *iskarātar* 'sting?', even though the latter is attested only in New Hittite; and *lahhiyanniye/a-* 'to set out' (*la-aḫ-ḫi-ya-an-ni-iš-ga-u-e-ni* KBo 4.4 III 50 Murš. II) may be derived from *lahhiyatar* 'campaign'.

Some other imperfectives in *-anna/i-* may be nonce formations, the clearest example being *parhannai*. It is attested only in the second Tablet of Kikkuli (KBo 3.5), where we also find *pār-ḫa-nu-zi* and several variants of the 3Sg. of the basic stem: *pār-aḫ-zi*, *pār-ḫa-i*, *pār-aḫ-ḫa-i* and *pār-ḫa-a-i* in similar contexts. It appears that the author of the text did not know what the proper form was.

¹⁹⁹ For this noun see HW² H: 682.

Most verbs, which regularly form their imperfective stem with the suffix *-anna/i-* like *huettiye/a-* ‘to draw’, *iya-* ‘to go’, *pars(iye/a)-* ‘to break’, *tuhs-* ‘to cut’, have middle endings, at least in the Old Hittite period. A very clear example is the verb *hatt-* ‘to pierce’, where the stem *hatt-* originally added middle endings while *hazziye/a-* added active endings, and it is the stem *hatt-* that has imperfectives in *-anna/i-*, while imperfectives in *-ske-* were derived from the stem *hazzie-*. Since other middle (medio-passive) verbs either have very few imperfectives in *-ske-* (for instance, *pahs-* ‘to protect’, for which the imperfective *pahhaskeddu* is attested only once, in KUB 39.101 II 12 (NS)) or have no imperfectives at all (*ki-* ‘to lie’, *kis-* ‘to turn out, happen’), it seems safe to assume that such verbs had *-anna/i-* as their imperfective suffix of choice²⁰⁰. The only active verb that regularly employed *-anna/i-* (at least in Old Hittite) is *walh-* ‘to beat, strike’²⁰¹. Unsurprisingly, since Middle Hittite the imperfective in *-anna/i-* started to be replaced with the imperfective in *-ske-* for this verb.

Nevertheless, the distribution of the *-anna/i-* must have been wider in proto-Hittite. There are some other verbs besides *walh-* that seem to have replaced *-anna/i-* with *-ske/a-*. The stem *piddanna-* ‘to carry, pay’ is attested only twice, in a Middle Hittite original and a copy of an Old Hittite text, whereas more numerous *ske-*forms come mostly from NH texts, cf. CHD P: 356. *Hullanna-* ‘to strike, defeat’ is attested once in CTH 789 (Song of Release), while both certain examples of *hulliske-* come from the New Hittite CTH 81 (Apology of Hattusili III). Since *piddai-* is likely to be a late, inner-Hittite formation (Kloekhorst 2008: 678f., HED 9: 96); it appears that the use of *-anna/i-* was expanding at some point before the suffix became recessive in Middle Hittite.

Whatever the original distribution of various imperfective suffixes in Hittite may have been, in later Hittite, *-anna/i-* became associated with middle verbs. The position

²⁰⁰ Note also that the imperfectives in *-anna-* have virtually no middle forms, with very rare exceptions like *hallanniyattari* KUB 4.3 obv. 9 and *tuh^{uh}šannatta* KBo 9.114 III 12. On the contrary, middle forms are quite frequent for the imperfectives in *-ske-*. Certain verbs, like *pai-* ‘to go’, have middle forms only in the imperfective stem.

²⁰¹ There is also a single active form *ša-li-i-an-zi* KUB 58.14 rev. 24 beside a much more frequent imperfective stem *salanna-*, but this could be a parallel formation of the same root, since *sallanna-* does not have the suffix *-ya-* that is present in *saliya-*, cf., e.g., *hatt-* and *hazzie-* ‘to pierce’.

of *-ss(a)-* is less clear. Three verbs, *iya-* ‘to do’, *halzai-* ‘to call’ and *sai-* ‘to impress’, show imperfective forms with *-ss(a)-* consistently since Old Hittite. Beside them, there is *warissa-* ‘to help’, which may well be a borrowing from Luwian, s. Starke 1990: 155f. It is likely that Hittite imperfectives in *-ss(a)-* are remnants of a once larger class that was better preserved in Luwian. In this case, the distribution of *-ske-* and *-anna/i-* is a secondary one that arose rather late in the prehistory of Hittite.

5.9 The origin of *-anna/i-* is disputed. According to Forrer, followed, e.g., by Kloekhorst (2008: 175f.), it originated from abstract nouns in *-ātar* (G.Sg. *-annas*). Indeed, some alleged imperfectives in *-anna/i-* are derived from nouns in *-ātar*, see 5.8 above, but the verbs that have regular imperfectives in *-anna/i-* do not have abstracts in *-ātar*. Besides, if Hitt. *-anna/i-* were derived from *-ātar*, its Luwian cognate should have been ***atna-* rather than attested *-anna-*²⁰², cf. Luwoid *taksatniye/a-* ‘to level’ from *taksatar* ‘level’. Therefore, *-anna/i-* and *-ātar* are not related.

Oettinger (1992b) compared the Hittite suffix *-anna-* to Skt. *-anyá-*, found in the verbs of the type *riṣanyá-* ‘to fail, miscarry’ and *bhuranyá-* ‘to be restless, stir’, generally believed to be denominatives. According to Oettinger, the Hittite and Sanskrit suffixes go back to a sequence **-en-yé-*; the geminated *-nn-* of the Hitt. *-anna/i-* is conditioned by the preceding accent and is not a result of assimilation in the cluster **-VnHV-*²⁰³. The element **-en-* in this sequence was an intensive suffix in PIE. One of the examples for it, provided by Oettinger, is PIE **kes-* ‘to comb’, cf. Hitt. *kiss-* ‘to comb’, vs. Gr. ξαίνω < **ksnyé-*, which besides ‘to comb’ also means ‘to mangle’. The problem with this hypothesis is as follows: verbs in **-ye/o-* that always take

²⁰² On the interpretation of Luwian forms in *-anna-* see 5.5. above.

²⁰³ He gives the following examples for this development: *lammar* ‘name’ < **nómr*, *hanna-* ‘grandmother’ < **h₂éno-*. The place of accent in the *-anna/i-* imperfectives is not established. However, the form *píd-da-a-an-ni-wa-an* KUB 14.1 obv. 74 (Madd.) suggests that it was on the first vowel of the suffix.

Kimball (1999: 127, 307) argues that while there are no secure examples of **n* after short accented **a*, **i*, **u*, short accented **e* and **o* were lengthened, so there were no conditions for doubling of nasals after short accented vowel. She notes, however, that there could be doubling of /n/ before accented vowels (op. cit. 308). Melchert also states that accented vowels are lengthened in open syllables (1994: 106ff.). On the contrary, Tremblay (1999-2000: 223f.) gives the following examples of doubling of /n/ after accent: the gemination of /n/ in clitics, e.g., *nu=nnas* (with the place of accent securely established) and the stem *anniske-* ‘to do’, where there is once a plene writing on the first syllable *a-an-ni-eš-ki-ši* (HKM 55 rev. 26 (MH/MS)). For the *-nn-* in *anniske-* see the entry for *annanu-* ‘to train’ in 4.1. As for *-nnas*, see now Kloekhorst 2014: 590 for a rule of regular fortition of intervocalic consonants in a pre-pretonic position in a sentence initial position.

endings of the *mi*-conjugation ended up in the *hi*-conjugation with an unusual type of ablaut in the suffix. Oettinger's explanation (1992b: 151ff.) requires a lot of analogical leveling and is implausible.

Jasanoff (2003: 122) compares Hittite imperfectives in *-anna/i-* with the Skt. type *grbhāyá-* 'to grasp, seize', for which since de Saussure (1879: 251f.) a complex suffix **-nh₂-yé/ó-* has been reconstructed. The Hittite suffix *-anna/i-* in his opinion reflects **-nh₂-i-* (to which in Indo-Iranian a thematic vowel that was added). Jasanoff explains the lack of *-i-* in the singular via analogy to *unna-* 'to bring' and *penna-* 'to take away',²⁰⁴ He claims that **-nh₂-i-* is also reflected in Greek (e.g., ὑφαίνω 'to weave') and Tocharian B *māntam*, *māntaññem* 'to hurt, be upset' (ibid. 124). The Skt. type *bhuranyá-* 'to be restless' also belongs here, although the nasal element is original only in verbs *iṣanyá-* 'to cause to make haste, drive' and *damanyá-* 'to subdue' as well as Av. *zaraniia-* 'to be irritated', while other verbs have got this suffix by analogy (ibid. 125f.).

The comparison of *-anna/i-* with **-nh₂-i-* and *grbhāyá-* type is difficult in several aspects. First, *-anna/i-* belongs to the *mēma/i-* type and therefore must contain the formant **-oi/i-*, for which see Kloekhorst 2006: 115f. Second, the initial *-a-* of *-anna/i-* cannot result from vocalization of **ṇ* since **ṇH-V-* would have yielded **-anHV-* (Kloekhorst 2008: 80). Note, however, that the most likely source for the second *-n-* in *-anna/i-* remains an assimilated laryngeal. Third, the Sanskrit present stems of the type *grbhāyá-* are closely related to class IX (infix) verbs and are in fact **ye/o-* extensions of the infixed stems, i.e. *grbhāyá-* < **g^hrb^h-ṇ-h₂-yé/ó-* is derived from IX class stem *grbhṇā-/grbhṇī-* < ***g^hrb^h-né-h₂-/g^hrb^h-n-ḥ₂-*, see Jasanoff 2003: 123. On the contrary, Hittite verbs that regularly take *-anna/i-* show no traces of the infix elsewhere in their stem formation²⁰⁵. Summing up, *-anna/i-* in e.g., *hattanna/i-* < **h₂et-o'-nH-oi/i-* is substantially different from *-āyá-* in Skt. *grbhāyá-* < **g^hrb^h-ṇ-h₂-yé/ó-* both in form and derivational prehistory.

²⁰⁴ According to Jasanoff, the singular in *unna-* and *penna-* was in turn modelled after prefixed verbs with the root *da-* 'to take', e.g., *pedahhi* 'I take away'.

²⁰⁵ In case of *hallanna/i-* and *hullanna/i-*, an assumption that the suffix *-anna/i-* contains a nasal infix would mean that these stems each have two infixes, as the basic verbs *halla-* and *hulle-* already have it, see the respective entries.

5.10 More promising is the comparison of Hitt. *-anna/i-* to Armenian present suffixes *-ana-* or *-ane-* (on which see Klingenschmitt 1982: 106ff., 159ff. and Kocharov 2011) and Greek suffix *-άνω* (of the type *ἁμαρτάνω* ‘to miss the mark, go wrong’, for which see Schwyzer 1939: 699f. and Sihler 1995: 518ff.). Even though Armenian and Greek suffixes most likely go back to **-ηH-e/o-* and therefore cannot be immediately related to *-anna/i-*, the element **-ηH-* is likely to be of the same origin. Whether it is related to the nasal infix is not clear. While both Hittite verbs with imperfectives in *-anna/i-* and Greek verbs in *-άνω* are mostly transitive, in Armenian *-ana-* became a productive suffix to derive denominatives, and the primary verbs with *-ana-* are either intransitive or labile, e.g., *luanal* ‘to wash/wash oneself’ or *slanal* ‘to fly, rush’. Moreover, neither Hittite imperfectives in *-anna/i-* nor Armenian verbs in *-ana-* have a specific affinity with infixed stems. In Greek, *-άνω* often occurs next to an infix, e.g., in *ἀνδάνω* ‘to please’ (Aor. ἔαδε). However, presents in *-άνω* also appear next to shorter present stems without infix, e.g., *ἐρυκάνω* next to much more frequent *ἐρύκω* ‘to restrain’, see further examples in Schwyzer 1939: 700. Vendryes (1923) argued for a punctive meaning of Greek presents in *-άνω* and claimed that they described the initial phase of action, i.e. they were inchoatives; since inchoative meaning was one of the functions of the Hittite imperfectives in *-anna/i-*, this makes the comparison of Hitt. *-anna/i-* and Gr. *-άνω* more plausible

Summing up, an indirect comparison of Hitt. *-anna/i-* with Greek *-άνω* and Armenian *-ana-* is formally possible, assuming the core element **-ηH-* is reflected in all three of these suffixes. If Greek presents in *-άνω*, indeed, have a punctive (especially inchoative) meaning, as per Vendryes, it would make them a very likely cognate with Hittite imperfectives in *-anna/i-*.